

We may therefore conclude that the unpaired eye in all the Crustacea that possess it is composed of three simple eyes, placed anterior to the brain, *with reversed optical bacilli, receiving conductive fibres of the optic nerve upon their outer margin*, and brought so close together that their pigmented or choroid layers are combined into a single mass.

We may detect a nearly identical structure of the visual organ in two other groups:—

1. The Chaetognatha, according to M. Hertwig, have absolutely the triple eye of the Crustacea; but, instead of being median and unpaired, it is repeated on the two sides of the head.

2. Certain Planarians, *Dendrocoelum luteum* for example, have two paired eyes, which, according to Justus Carrière, have the structure which I adopt for one of the simple eyes united in the median eye of the Crustacea.

It is probable that the eye of the Chaetognatha and Crustacea is to be referred back to the type of the Planarians, but that the two former groups have no direct relationship between them.

The method of thin sections has revealed to me some other interesting peculiarities, which I hope soon to publish in a more extended memoir upon *Cyclops*.

The eye which most nearly approaches that of the Crustacea and Chaetognatha seems to be that of the *Planariæ*. M. Justus Carrière has just published (*Arch. für mikr. Anat.* xx. p. 160) a memoir on the eyes of these very primitive animals; and, according to his text and figures, it must be assumed that each eye of the *Planaria* or *Dendrocoelum* represents one of the components of the eye of the Crustacea. It is therefore more rational to refer back the eyes of the Crustacea and Chaetognatha to such a primitive ancestral group as the Turbellaria than to seek direct approximations between the two former groups.—*Comptes Rendus*, May 22, 1882, p. 1430.

Sponges from the Neighbourhood of Boston, U.S.

Mr. E. Potts exhibited some fragments of freshwater sponges collected in the Cochituate Aqueduct and sent to him by the Superintendent of the Boston Waterworks. Alluding to the deleterious effects recently attributed to this sponge, as the cause of the pollution of the Boston water-supply, he said he was not prepared either to affirm or deny it. While he was well aware that a decaying freshwater sponge was one of the foulest things in nature, in his own experience he had never met with it in sufficient quantities, locally, to suppose it capable of tainting, in its decay, millions of gallons of water, as now represented.

An examination of the sponge as to its specific relations revealed some peculiar facts. Primarily it was evident that the sponge was much "mixed," the presence of two or more species being very apparent.

One of these, with long branching finger-like processes, smooth

skeleton-spicula, no appearance of dermal or flesh-spicula, while the abundant *smooth* statospheres retained few if any acerate spicules, bore a sufficiently close resemblance to the description of *Spongilla paupercula*, as given by Dr. Bowerbank from specimens collected in the same or a neighbouring locality before 1863.

With this form was found another, probably altogether sessile, consisting of an intertexture of stout fusiform acerate skeleton-spicules, abruptly pointed, coarsely spined, except near the extremities; spines subconical, acute; dermal spicules absent or undiscovered; statospheres without granular coating, some of them exhibiting a few misplaced, irregular or malformed birotulate spicules, the distinguishing feature of which is the prolongation of the familiar boss upon the outer surface of each rotule into a long acuminate spine, in line with and a continuation of the shaft. He suggested for this species, provisionally, the name *Meyenia acuminata*.

The exceptional features referred to above, as marking this collection of sponges, were, first, the fact that all the statospheres, whether belonging to the genus *Spongilla* or *Meyenia*, were *smooth*—that is, without a granular or cellular “crust;” second, the apparent absence of dermal spicules in both, and the abnormal character of those belonging to the statospheres. The appearance is not infrequent, but has, so far as known, heretofore been limited to the genus *Spongilla*. The recurrence of the same feature in the associated genus *Meyenia*, coupled with the fact that many of the birotulates upon its statospheres were imperfect, the rays being more or less aborted, approximating their shape to that of the spined fusiform acerates of *Spongilla*, gave rise to the suggestion that here, possibly, had been, not merely a mechanical mixture by inter- or superposition of species, but an organic hybridization produced by the flowing together of the amœboid particles of which the sponges are composed, or even by a fertilization of the ova of one by the spermatozooids of the other.

Several facts indicative of the probability that such hybridization may take place were adduced, and the further discussion of the subject deferred until an examination of the living sponge in its native locality, or experiments upon those germinated in confinement, could be made.

It is important to notice that the specimens received were collected in February, when the sarcode matter had nearly all been washed away, with, probably, accompanying changes in the presence or numbers of the smaller spicula.—*Proc. Acad. Nat. Sci. Philad.*, Feb. 14, 1882, p. 69.

On the Priority of Euplœa Castelnaui of Felder over Euplœa phœbus.
By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

In the first part of his ‘*Rhopalocera Malayana*,’ p. 24, Mr. Distant gives priority to *E. Castelnaui*; he remarks as follows:—“As Mr. Butler has himself admitted the identity of his *E. phœbus* and *E.*